



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories



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February 25, 2015
Vol. 12; No. 6

**MI's Current Influenza
Activity Level:**
Regional

Updates of Interest:

Live Attenuated Influenza Vaccine is scheduled to be discussed and voted on tomorrow at the [ACIP meeting](#).

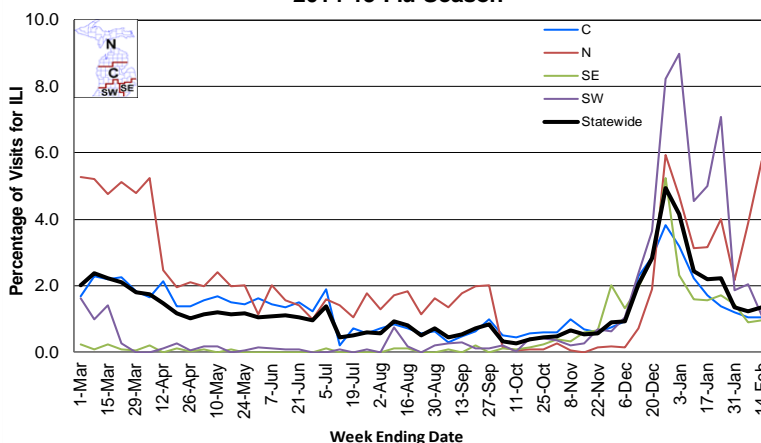
Influenza Surveillance Report for the Week Ending February 14, 2015

Acute Non-Mumps Parotitis

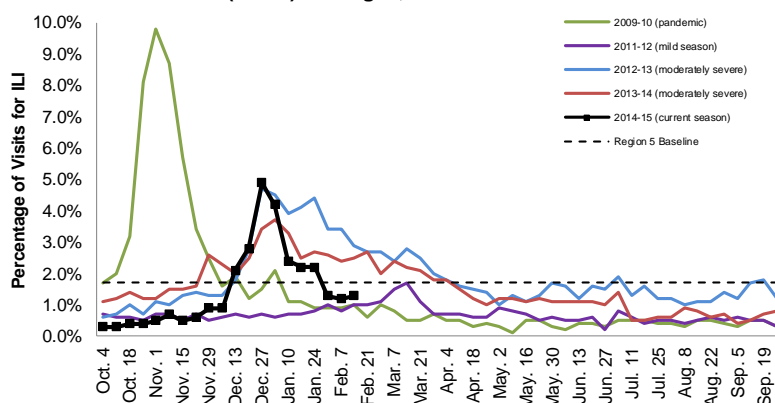
Acute parotitis, inflammation of the parotid gland, is a common manifestation of mumps viral infection and a rare complication of influenza. Since December 2014, the Centers for Disease Control and Prevention (CDC) has received reports of non-mumps parotitis cases in persons with laboratory-confirmed influenza from multiple states, including Michigan.

MDCH, in collaboration with CDC, is participating in a multistate investigation of parotitis cases in the absence of mumps infection. The objectives of the current investigation are to describe the clinical and epidemiologic features of non-mumps parotitis and to identify potential risk factors for developing influenza-associated parotitis in particular. The findings will be used to inform prevention and control recommendations in Michigan and in response to the broader multistate investigation.

**Percentage of Visits for Influenza-like Illness (ILI)
Reported by Sentinel Providers, Statewide and Regions
2014-15 Flu Season**



**Percentage of Visits for Influenza-like Illness (ILI) Reported by
the US Outpatient Influenza-like Illness Surveillance Network
(ILINet): Michigan, Select Seasons**



Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 1.3% overall; this is below the regional baseline (1.7%). A total of 128 patient visits due to ILI were reported out of 9,554 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (32 total):

- C (12)
- N (4)
- SE (14)
- SW (2)

Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Stefanie DeVita at devitas1@michigan.gov for more information.

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Michigan Disease Surveillance System

MDSS influenza data indicated that compared to levels from the previous week, individual reports increased slightly and aggregate reports decreased. Individual reports are higher than levels seen during the same time period last year while aggregate reports are lower compared to the previous year.

Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional and respiratory complaints decreased. Levels of both constitutional and respiratory complaints were higher than levels compared to the same time period last year.

- 3 constitutional alerts (3C)
- 4 respiratory alerts (1C, 3N)

Hospital Surveillance

The CDC Influenza Hospitalization Surveillance Project provides population-based rates of hospitalization due to severe influenza illness through active surveillance and chart review of lab-confirmed cases, starting on October 1, 2014, for Clinton, Eaton, Genesee, and Ingham counties. Nine influenza-related hospitalizations were reported (accumulated total since Oct. 1: 68 children, 284 adults).

Based on these counts, there have been 35.2 pediatric influenza hospitalizations per 100,000 population and 41.5 adult influenza hospitalizations per 100,000 population within the catchment area.

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 12 hospitals (N,C,SE,SW) reported. Results are listed in the table below. **Additional hospitals are welcome to join; please contact Seth Eckel at eckels1@michigan.gov.**

| Age Group | New Flu Hospitalizations Reported | Total 2014-15 Flu Hospitalizations to Date |
|------------------|-----------------------------------|--|
| 0-4 years | 3 (2C, 1SW) | 26 (18C, 4SE, 4SW) |
| 5-17 years | 0 | 25 (24C, 1SE) |
| 18-49 years | 1 (C) | 55 (1N, 10C, 42SE, 2SW) |
| 50-64 years | 4 (1C, 3SE) | 87 (10C, 67SE, 10SW) |
| 65 years & older | 11 (4N, 6SE, 1SW) | 421 (6N, 16C, 357SE, 42SW) |
| Total | 19 (4N, 4C, 9SE, 2SW) | 614 (7N, 78C, 471SE, 58SW) |

Laboratory Surveillance

MDCH Bureau of Laboratories reported 10 new positive influenza results: 10 A/H3. A total of 480 positive influenza results have been reported for the 2014-15 season. Influenza results for the 2014-15 season are reported in the table below.

| Respiratory Virus | # Positive Respiratory Virus Results by Region | | | | Total | # Specimens Antigenically Characterized | # Tested for Antiviral Resistance |
|----------------------------|--|----|----|-----|-------|---|-----------------------------------|
| | C | N | SE | SW | | | # Resistant / Total # Tested |
| 2009 A/H1N1pdm | | | | 1 | 1 | | |
| Influenza A/H3 | 109 | 33 | 96 | 211 | 449 | 12* (3 A/Texas/50/2012-like**, 9 A/Switzerland/9715293/2013-like) | 0 / 104 |
| Influenza B | 4 | 4 | 16 | 4 | 28 | 27 (26 B/Yamagata lineage, 1 inconclusive) | |
| Influenza A, unsubtypeable | 1 | | | 1 | 2 | | |

*Specimens antigenically characterized by CDC; **A/Texas/50/2012 (H3N2) virus is the H3N2 component of the 2014-15 Northern Hemisphere flu vaccine. A/Switzerland/9715293/2013-like is an antigenic variant of the current vaccine virus.

In addition, 13 sentinel clinical labs (4SE,2SW,6C,1N) reported influenza results. Thirteen labs (SE,SW,C,N) reported influenza A activity with all sites showing a continued gradual decline and several sites now at low levels. Eight labs (SE,SW,C) reported low or slightly elevated influenza B activity. Five labs (SE,SW,C) reported low Parainfluenza activity. Thirteen labs (SE,SW,C,N) reported low to moderate RSV activity, with the highest levels continuing in the SE region. Four labs (SE,SW,C) reported low Adenovirus activity. Six labs (SE,SW,C) reported low or slightly elevated hMPV activity. Most testing volumes continue to drop further or remain steady, but about half of the sites remain in the high range.

Influenza Congregate Settings Outbreaks

There were 2 respiratory facility outbreaks (1 confirmed flu A and 1 unknown etiology/no testing) reported. There have been a total of 133 respiratory facility outbreaks reported to MDCH for the 2014-15 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

| Facility Type | C | N | SE | SW | Total |
|---|-----------|-----------|-----------|-----------|------------|
| Adult Care Facility | | 1 | 2 | | 3 |
| Long-Term Care / Assisted Living Facility | 26 | 9 | 28 | 32 | 95 |
| K-12 School | 1 | | 1 | | 2 |
| Daycare | | | | 1 | 1 |
| Unknown / Investigation Pending | 16 | | 4 | 9 | 29 |
| Healthcare Facility | | | | 3 | 3 |
| Total | 43 | 10 | 35 | 45 | 133 |

Influenza-associated Pediatric Mortality

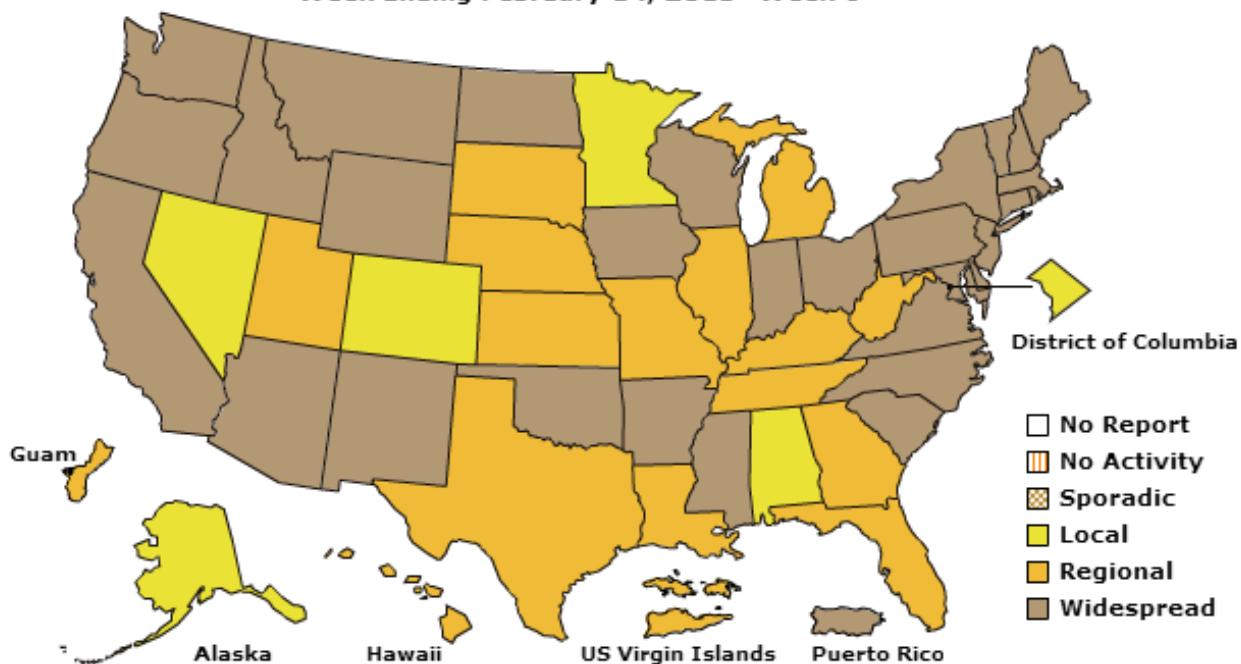
No new influenza-associated pediatric deaths were reported to MDCH. One influenza-associated pediatric death (1SE) has been reported to MDCH for the 2014-15 season.

National: Influenza activity decreased but remained elevated in the United States, with 3.2% of outpatient visits due to influenza-like illness. Six influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 86. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Influenza activity remained high in the Northern Hemisphere with influenza A(H3N2) viruses predominating. Antigenic characterization of most recent A(H3N2) viruses thus far indicated differences from the A(H3N2) virus used in the influenza vaccines for the Northern Hemisphere 2014-2015. Summary information is available online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending February 14, 2015- Week 6





ACIP MEETING FEB. 25-26

The Advisory Committee on Immunization Practices (ACIP) was scheduled to meet this week. Unfortunately, inclement weather closed CDC's campus today (Feb. 25) so today's portion of the ACIP meeting was [cancelled](#). Live attenuated influenza vaccine is scheduled to be discussed tomorrow at 10:45 AM, weather permitting.

INFLUENZA ACTIVITY THROUGHOUT THE U.S.

- CIDRAP: [U.S. flu season continues to hit elderly hard](#)
- [North Dakota suffers through 'severe year for flu deaths' with 48](#)
- [North Carolina's flu death total reaches 170](#)
- [Ohio reports continued drop in flu hospitalizations](#)

AVIAN INFLUENZA A(H5N1)

- [Egypt confirms 5 more H5N1 cases](#)
- [Phase II, randomized, open, controlled study of ASO3-adjuvanted H5N1 pre-pandemic influenza vaccine in children aged 3 to 9 years: follow-up of safety and immunogenicity persistence at 24 months post-vaccination](#)
 - 2 doses showed low but persistent humoral immune responses, strong persistence of cell-mediated immunity

AVIAN INFLUENZA A(H7N9)

- [H7N9 sickens 3 more in China](#)
- Global case count is at [613 cases](#)
- [Seasonal flu and bird flu could mix and mutate, warns HKU scientist](#)
- [Preexisting human antibodies neutralize recently emerged H7N9 influenza strains](#)
- [Impact of route of exposure and challenge dose on the pathogenesis of H7N9 low pathogenicity avian influenza virus in chickens](#)

OTHER AVIAN INFLUENZA NEWS

- [Novel Eurasian highly pathogenic influenza A H5 viruses in wild birds, Washington, USA, 2014](#)

FLU WEBSITES

www.michigan.gov/flu
www.cdc.gov/flu
www.flu.gov
<http://vaccine.healthmap.org/>

PEDIATRIC FLU CALL TOMORROW

Clinician Outreach and Communication Activity (COCA) is holding a webinar tomorrow, February 26, from 2-3 PM called, "Protecting Children: Influenza Updates for Clinicians." Registration is not required. To join the webinar, use [this link](#) or call 1-888-810-4792 (passcode: 7545982). Clinicians will learn about the current state of flu activity related to children, the importance of continued vaccination despite the mismatch and low vaccine effectiveness, and strategies for using antiviral therapy early to prevent and treat flu.

INFLUENZA-RELATED JOURNAL ARTICLES

- [Healthcare worker influenza immunization vaccinate or mask policy: strategies for cost effective implementation and subsequent reductions in staff absenteeism due to illness](#)
 - Flu vaccination was associated with reduced absenteeism
- [An effective strategy for influenza vaccination of healthcare workers in Australia: experience at a large health service without a mandatory policy](#)
 - Non-mandatory strategy using social marketing and customized staff database was successful in increasing vaccination uptake by all staff categories
- [Do corticosteroids reduce the mortality of influenza A\(H1N1\) infection? a meta-analysis](#)
 - Available evidence did not support use of corticosteroids as standard of care for patients with severe influenza
- [The contrasting phylodynamics of human influenza B viruses](#)

OTHER INFLUENZA-RELATED NEWS

- [CDC Seasonal Flu Doses Distributed](#): ~147.8 million doses in U.S. as of February 6, 2015
- WHO: [Global flu update](#) (Feb. 23)

Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

For questions or to be added to the distribution list, please contact Stefanie DeVita at devitas1@michigan.gov.

MDCH Contributors

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